COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604485
Project:	Wiggins Soil Pile/202008.01	**Date Collected:**	09/18/2006
Sample Matrix:	Soil	**Date Received:**	09/19/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	1W	**Units:**	ug/Kg
Lab Code:	J0604485-001	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	3.9	1.7	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	**2.8**	J	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.7	3.0	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.7	3.1	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	3.9	1.7	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**1700**	D	390	7.9	10	09/20/06	09/21/06	JWG0602936	
Phenanthrene	ND	U	7.7	3.8	1	09/20/06	09/20/06	JWG0602936	
Anthracene	**7.6**		3.9	0.69	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	**3.3**	J	3.9	0.67	1	09/20/06	09/20/06	JWG0602936	
Pyrene	**1.9**	J	3.9	0.59	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	3.9	0.54	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	ND	U	3.9	0.57	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	ND	U	3.9	0.90	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	3.9	0.98	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	62	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	88	34-166	09/20/06	Acceptable
p-Terphenyl-d14	81	41-146	09/20/06	Acceptable

mments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604485
Project:	Wiggins Soil Pile/202008.01	**Date Collected:**	09/18/2006
Sample Matrix:	Soil	**Date Received:**	09/19/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	2W	**Units:**	ug/Kg
Lab Code:	J0604485-002	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	3.9	1.7	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.7	3.0	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.7	3.1	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	3.9	1.7	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**6.5**	J	39	0.79	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	7.7	3.8	1	09/20/06	09/20/06	JWG0602936	
Anthracene	ND	U	3.9	0.69	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	3.9	0.67	1	09/20/06	09/20/06	JWG0602936	
Pyrene	ND	U	3.9	0.59	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	3.9	0.55	1	09/20/06	09/20/06	JWG0602936	
[illegible]nz(a)anthracene	ND	U	3.9	0.57	1	09/20/06	09/20/06	JWG0602936	
[illegible]nzo(b)fluoranthene	ND	U	3.9	0.91	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	3.9	0.98	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	59	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	84	34-166	09/20/06	Acceptable
p-Terphenyl-d14	76	41-146	09/20/06	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604485
Project:	Wiggins Soil Pile/202008.01	**Date Collected:**	09/18/2006
Sample Matrix:	Soil	**Date Received:**	09/19/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	3W	**Units:**	ug/Kg
Lab Code:	J0604485-003	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	3.9	1.8	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.8	3.0	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.8	3.1	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	3.9	1.8	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**21**	J	39	0.80	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	7.8	3.8	1	09/20/06	09/20/06	JWG0602936	
Anthracene	**4.7**		3.9	0.70	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	3.9	0.67	1	09/20/06	09/20/06	JWG0602936	
Pyrene	ND	U	3.9	0.60	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	3.9	0.55	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	ND	U	3.9	0.57	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	ND	U	3.9	0.91	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	3.9	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	3.9	0.99	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	3.9	0.58	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	3.9	0.74	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	62	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	91	34-166	09/20/06	Acceptable
p-Terphenyl-d14	84	41-146	09/20/06	Acceptable

Comments:

Client: Premier Environmental Services
Project: Wiggins Soil Pile/202008.01
Sample Matrix: Soil

Service Request: J0604485
Date Collected: 09/18/2006
Date Received: 09/19/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name: 4F
Lab Code: J0604485-004

Extraction Method: EPA 3550
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.9	3.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.9	3.2	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**240**		40	0.82	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	7.9	3.9	1	09/20/06	09/20/06	JWG0602936	
Anthracene	**5.9**		4.0	0.71	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	**1.5**	J	4.0	0.69	1	09/20/06	09/20/06	JWG0602936	
Pyrene	**1.2**	J	4.0	0.61	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	4.0	0.56	1	09/20/06	09/20/06	JWG0602936	
Benz(a)anthracene	ND	U	4.0	0.58	1	09/20/06	09/20/06	JWG0602936	
Benzo(b)fluoranthene	ND	U	4.0	0.93	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	4.0	1.1	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	66	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	92	34-166	09/20/06	Acceptable
p-Terphenyl-d14	83	41-146	09/20/06	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604485
Project:	Wiggins Soil Pile/202008.01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JWG0602936-4	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.4	0.51	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	3.4	1.5	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	3.4	1.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	6.8	2.6	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	6.8	2.7	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	3.4	1.5	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**7.8**	J	34	0.70	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	6.8	3.3	1	09/20/06	09/20/06	JWG0602936	
Anthracene	ND	U	3.4	0.61	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	3.4	0.59	1	09/20/06	09/20/06	JWG0602936	
Pyrene	ND	U	3.4	0.52	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	3.4	0.48	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	ND	U	3.4	0.50	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	ND	U	3.4	0.80	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	3.4	0.65	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	3.4	1.1	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	3.4	0.87	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	3.4	0.51	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	3.4	0.65	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	64	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	79	34-166	09/20/06	Acceptable
p-Terphenyl-d14	82	41-146	09/20/06	Acceptable

Comments:

Analytical Report

Client : Premier Environmental Services
Project Name : Wiggins Soil Pile
Project Number : 202008.01
Sample Matrix : SOIL

Service Request : J0604485
Date Collected : 09/18/06
Date Received : 09/19/06

Solids, Total

Units : PERCENT
Analysis Method : 160.3 MOD
Basis : NA
Test Notes :

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
1W	J0604485-001	0.1	0.1	1	09/20/06 11:00	89	
2W	J0604485-002	0.1	0.1	1	09/20/06 11:00	89	
3W	J0604485-003	0.1	0.1	1	09/20/06 11:00	88	
4F	J0604485-004	0.1	0.1	1	09/20/06 11:00	86	

Report By:Palimi

Client: Premier Environmental Services
Project: Wiggins Soil Pile/202008.01
Sample Matrix: Soil

Service Request: J0604485

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3550
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
1W	J0604485-001	62	88	81
2W	J0604485-002	59	84	76
3W	J0604485-003	62	91	84
4F	J0604485-004	66	92	83
Method Blank	JWG0602936-4	64	79	82
Lab Control Sample	JWG0602936-3	78	99	90

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorobiphenyl	30-118
Sur2 =	2,4,6-Tribromophenol	34-166
Sur3 =	p-Terphenyl-d14	41-146

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Premier Environmental Services
Project: Wiggins Soil Pile/202008.01
Sample Matrix: Soil

Service Request: J0604485
Date Extracted: 09/20/2006
Date Analyzed: 09/20/2006

Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3550
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: JWG0602936

	Lab Control Sample JWG0602936-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Naphthalene	121	167	73	30-112
2-Methylnaphthalene	134	167	80	30-118
1-Methylnaphthalene	122	167	73	32-114
Acenaphthylene	125	167	75	27-124
Acenaphthene	131	167	78	26-119
Fluorene	139	167	83	30-125
Pentachlorophenol	218	167	131	16-140
Phenanthrene	135	167	81	32-119
Anthracene	117	167	70	31-105
Fluoranthene	141	167	85	35-131
Pyrene	141	167	84	30-136
Chrysene	146	167	88	44-120
Benz(a)anthracene	145	167	87	40-125
Benzo(b)fluoranthene	172	167	103	43-130
Benzo(k)fluoranthene	150	167	90	47-123
Benzo(a)pyrene	138	167	83	29-104
Indeno(1,2,3-cd)pyrene	158	167	95	40-124
Dibenz(a,h)anthracene	162	167	97	45-125
Benzo(g,h,i)perylene	156	167	94	42-121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Premier Environmental Services	**Service Request :**	J0604485
Project Name :	Wiggins Soil Pile	**Date Collected :**	09/18/06
Project Number :	202008.01	**Date Received :**	09/19/06
Sample Matrix :	SOIL	**Date Extracted :**	NA
		Date Analyzed :	09/20/06

Duplicate Summary
Inorganic Parameters

Sample Name : 1W
Lab Code : J0604485-001DUP
Test Notes :

Units : PERCENT
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	160.3 MOD	0.1	89	89	89	<1	

Report By:Palimi

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Premier Service Request # JAA04485

Project: Wiggins Soil Pile

Cooler received on 9.19.06 and opened on 9.19.06 by KW

COURIER: CAS UPS (FEDEX) DHL CLIENT Tracking # 8592 3269 2701

1	Were custody seals on outside of cooler?	Yes	(No)	N/A
2	Were seals intact, signed and dated?	Yes	No	(N/A)
3	Were custody papers properly filled out?	Yes	No	(N/A)
4	Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C) 3.1			
5	Correct Temperature?	(Yes)	No	N/A
6	Were Ice or Ice Packs present	(Yes)	No	N/A
7	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A
8	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A
9	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A
10	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A
11	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)

HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2

Preservative additions noted below

12	Were all samples received within analysis holding times?	(Yes)	No	N/A
13	Were VOA vials checked for absence of air bubbles? If present, note below	Yes	No	(N/A)
14	Where did the bottles originate?	CAS	(Client)	

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Inititials

Additional comments and/or explanation of all discrepancies noted above:

Cooler arrived without strapping tape to secure lid.

Client approval to run samples if discrepancies noted: Date 9.19.06

SR # : J1004485 Date: 9.19.06 Initials: KW

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

	Bottle Code																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	40mL	40mL	40mL	40mL	125mL	125mL	125mL	125mL	250mL	250mL	250mL	250mL	250mL	250mL	250mL	500mL	500mL	500mL	1L	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100mL	Misc.
Container	G	G	G	G	P	P	P	P	P	P	P	P	P	G	G	G	P	P	P	P	G	G	G	G	G	G	G	ENC	P	Misc.
Pres.		HCl	Sodium Thiosulfate	H2SO4		HCl	H2SO4	HNO3		H2SO4	HNO3	ZnAcetate NaOH	NaOH		HNO3		H2SO4	HNO3		HNO3		HCl	H2SO4						Sodium Thiosulfate	
Req. pH	N/A	<2	N/A	<2	N/A	<2	<2	<2	N/A	<2	<2	>9	>12	N/A	<2	N/A	<2	<2	N/A	<2	N/A	<2	<2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sample #	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-				-	-
-001																1														
-002																1														
-003																1														
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D604485

CHAIN OF CUSTODY RECORD

PROJECT NO. 202008.01	PROJECT NAME Wiggins Soil Pile	No. of Container(s)	[redacted]	Remarks
SAMPLERS (Sign) E Pollitzer	Ernie Pollitzer			

Sample No.	Date	Time	Comp.	Grab	Sample Location New #			
								8270
1 W	9/18/06	4:10		X		1	Soil	PAHs & PCP
2 W	"	4:20		X		1	"	"
3 W	"	4:30		X		1	"	"
4 F	"	4:40		X		1	"	"

RELINQUISHED BY: (Sign) E Pollitzer	DATE/TIME 9/18 6:00 PM	RECEIVED BY: (Sign) [redacted]	DATE/TIME 9.19.06 0900
RECEIVED BY: (Sign)	RELINQUISHED BY: (Sign)	DATE/TIME	RECEIVED BY: (Sign)
RELINQUISHED BY: (Sign)	DATE/TIME	RECEIVED FOR DISPOSAL BY: (Sign)	

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~~Forest Products Laboratory~~
~~Box 9820~~
~~Mississippi State, MS 39762-9820~~

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Premier Environmental Services	**Service Request No.:**	J0604509
Project:	IP Wiggins	**Date Received:**	9/20/06
Sample Matrix:	soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

3 soil samples were received for analysis at Columbia Analytical Services on 9/20/06. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 4±2°C upon receipt at the lab.

PAHs and PCP by GC-MS SIM

Batch QC Notes and Discussion

Quality control samples for MS/DMS samples were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

No problems were observed with this delivery group.

Approved by Tom D. Hessing Date 9/21/06

Data Qualifiers

Inorganic Data

*	The result is an outlier. See case narrative.
#	The control limit criteria are not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimated amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.
i	The MRL/MDL has been elevated due to matrix interference.
X	See case narrative.

Metals Data

*	The result is an outlier. See case narrative.
#	The control limit criteria are not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The reported value is estimated because of the presence of matrix interference.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The result was determined by Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data

*	The result is an outlier. See case narrative.
#	The control limit criteria are not applicable. See case narrative.
A	The tentatively identified compound is a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria were exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides)
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Petroleum Hydrocarbon Specific

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J0604509-001	5W	09/19/06	16:00
J0604509-002	6F	09/19/06	16:04
J0604509-003	7W	09/19/06	16:12

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604509
Project:	IP Wiggins/202008.01	**Date Collected:**	09/19/2006
Sample Matrix:	Soil	**Date Received:**	09/20/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	5W	**Units:**	ug/Kg
Lab Code:	J0604509-001	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	8.0	3.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	8.0	3.2	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**2.9**	I	40	0.82	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	8.0	3.9	1	09/20/06	09/20/06	JWG0602936	
Anthracene	ND	U	4.0	0.72	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	4.0	0.69	1	09/20/06	09/20/06	JWG0602936	
Pyrene	ND	U	4.0	0.61	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	4.0	0.56	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	ND	U	4.0	0.59	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	ND	U	4.0	0.94	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	**2.8**	I	4.0	1.1	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	**1.7**	I	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	**3.1**	I	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	64	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	92	34-166	09/20/06	Acceptable
p-Terphenyl-d14	82	41-146	09/20/06	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604509
Project:	IP Wiggins/202008.01	**Date Collected:**	09/19/2006
Sample Matrix:	Soil	**Date Received:**	09/20/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	6F	**Units:**	ug/Kg
Lab Code:	J0604509-002	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.9	3.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.9	3.2	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**180**		40	0.82	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	**3.9**	I	7.9	3.9	1	09/20/06	09/20/06	JWG0602936	
Anthracene	**3.2**	I	4.0	0.71	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	**25**		4.0	0.69	1	09/20/06	09/20/06	JWG0602936	
Pyrene	**29**		4.0	0.61	1	09/20/06	09/20/06	JWG0602936	
Chrysene	**8.7**		4.0	0.56	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	**5.3**		4.0	0.59	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	**11**		4.0	0.93	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	**7.7**		4.0	0.76	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	**3.5**	I	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	**2.4**	I	4.0	1.1	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	**2.1**	I	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	65	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	90	34-166	09/20/06	Acceptable
p-Terphenyl-d14	82	41-146	09/20/06	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604509
Project:	IP Wiggins/202008.01	**Date Collected:**	09/19/2006
Sample Matrix:	Soil	**Date Received:**	09/20/2006

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	7W	**Units:**	ug/Kg
Lab Code:	J0604509-003	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	7.9	3.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	7.9	3.2	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	4.0	1.8	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**180**		40	0.82	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	7.9	3.9	1	09/20/06	09/20/06	JWG0602936	
Anthracene	**2.0**	I	4.0	0.71	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	4.0	0.69	1	09/20/06	09/20/06	JWG0602936	
Pyrene	**2.2**	I	4.0	0.61	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	4.0	0.56	1	09/20/06	09/20/06	JWG0602936	
nz(a)anthracene	ND	U	4.0	0.58	1	09/20/06	09/20/06	JWG0602936	
nzo(b)fluoranthene	ND	U	4.0	0.93	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	4.0	1.3	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	4.0	1.1	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	4.0	0.60	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	4.0	0.76	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	59	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	88	34-166	09/20/06	Acceptable
p-Terphenyl-d14	80	41-146	09/20/06	Acceptable

mments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Premier Environmental Services	**Service Request:**	J0604509
Project:	IP Wiggins/202008.01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	JWG0602936-4	**Basis:**	Dry
Extraction Method:	EPA 3550	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	3.4	0.51	1	09/20/06	09/20/06	JWG0602936	
2-Methylnaphthalene	ND	U	3.4	1.5	1	09/20/06	09/20/06	JWG0602936	
1-Methylnaphthalene	ND	U	3.4	1.1	1	09/20/06	09/20/06	JWG0602936	
Acenaphthylene	ND	U	6.8	2.6	1	09/20/06	09/20/06	JWG0602936	
Acenaphthene	ND	U	6.8	2.7	1	09/20/06	09/20/06	JWG0602936	
Fluorene	ND	U	3.4	1.5	1	09/20/06	09/20/06	JWG0602936	
Pentachlorophenol	**7.8**	I	34	0.70	1	09/20/06	09/20/06	JWG0602936	
Phenanthrene	ND	U	6.8	3.3	1	09/20/06	09/20/06	JWG0602936	
Anthracene	ND	U	3.4	0.61	1	09/20/06	09/20/06	JWG0602936	
Fluoranthene	ND	U	3.4	0.59	1	09/20/06	09/20/06	JWG0602936	
Pyrene	ND	U	3.4	0.52	1	09/20/06	09/20/06	JWG0602936	
Chrysene	ND	U	3.4	0.48	1	09/20/06	09/20/06	JWG0602936	
[illegible]nz(a)anthracene	ND	U	3.4	0.50	1	09/20/06	09/20/06	JWG0602936	
[illegible]nzo(b)fluoranthene	ND	U	3.4	0.80	1	09/20/06	09/20/06	JWG0602936	
Benzo(k)fluoranthene	ND	U	3.4	0.65	1	09/20/06	09/20/06	JWG0602936	
Benzo(a)pyrene	ND	U	3.4	1.1	1	09/20/06	09/20/06	JWG0602936	
Indeno(1,2,3-cd)pyrene	ND	U	3.4	0.87	1	09/20/06	09/20/06	JWG0602936	
Dibenz(a,h)anthracene	ND	U	3.4	0.51	1	09/20/06	09/20/06	JWG0602936	
Benzo(g,h,i)perylene	ND	U	3.4	0.65	1	09/20/06	09/20/06	JWG0602936	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorobiphenyl	64	30-118	09/20/06	Acceptable
2,4,6-Tribromophenol	79	34-166	09/20/06	Acceptable
p-Terphenyl-d14	82	41-146	09/20/06	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Premier Environmental Services
Project Name : IP Wiggins
Project Number : 202008.01
Sample Matrix : SOIL

Service Request : J0604509
Date Collected : 09/19/06
Date Received : 09/20/06

Solids, Total

Units : PERCENT
Analysis Method : 160.3 MOD
Basis : NA
Test Notes :

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
5W	J0604509-001	0.1	0.1	1	09/20/06 11:00	86	
6F	J0604509-002	0.1	0.1	1	09/20/06 11:00	86	
7W	J0604509-003	0.1	0.1	1	09/20/06 11:00	86	

Report By:Palimi

Client: Premier Environmental Services
Project: IP Wiggins/202008.01
Sample Matrix: Soil

Service Request: J0604509

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3550
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
5W	J0604509-001	64	92	82
6F	J0604509-002	65	90	82
7W	J0604509-003	59	88	80
Method Blank	JWG0602936-4	64	79	82
Lab Control Sample	JWG0602936-3	78	99	90

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorobiphenyl	30-118
Sur2 =	2,4,6-Tribromophenol	34-166
Sur3 =	p-Terphenyl-d14	41-146

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Premier Environmental Services
Project: IP Wiggins/202008.01
Sample Matrix: Soil

Service Request: J0604509
Date Extracted: 09/20/2006
Date Analyzed: 09/20/2006

Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3550
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: JWG0602936

Analyte Name	Lab Control Sample JWG0602936-3 Lab Control Spike Result	Expected	%Rec	%Rec Limits
Naphthalene	121	167	73	30-112
2-Methylnaphthalene	134	167	80	30-118
1-Methylnaphthalene	122	167	73	32-114
Acenaphthylene	125	167	75	27-124
Acenaphthene	131	167	78	26-119
Fluorene	139	167	83	30-125
Pentachlorophenol	218	167	131	16-140
Phenanthrene	135	167	81	32-119
Anthracene	117	167	70	31-105
Fluoranthene	141	167	85	35-131
Pyrene	141	167	84	30-136
Chrysene	146	167	88	44-120
Benz(a)anthracene	145	167	87	40-125
Benzo(b)fluoranthene	172	167	103	43-130
Benzo(k)fluoranthene	150	167	90	47-123
Benzo(a)pyrene	138	167	83	29-104
Indeno(1,2,3-cd)pyrene	158	167	95	40-124
Dibenz(a,h)anthracene	162	167	97	45-125
Benzo(g,h,i)perylene	156	167	94	42-121

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.